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References: 1. David, N. A.; Porter, G. A., and Gray, R. H.: Monographs on Therapy 5:60 (Feb.) 1960. 2. Ford, R. V.: Current Therap. Res. 2:92 (Mar.) 1960.

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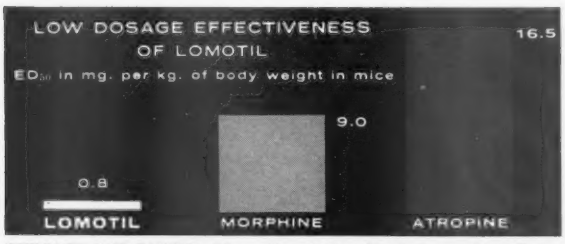

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New Desbutal® Gradumet® brings together two classic drugs

in an ingenious, long-acting vehicle that "meters" its release as surely as the ticking of a clock

Predictable . . . uniform . . . and of daylong duration. This is the drug release pattern Abbott now offers in the new Desbutal Gradumet form.

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ALASKA MEDICINE

Official Journal of the Alaska State Medical Association

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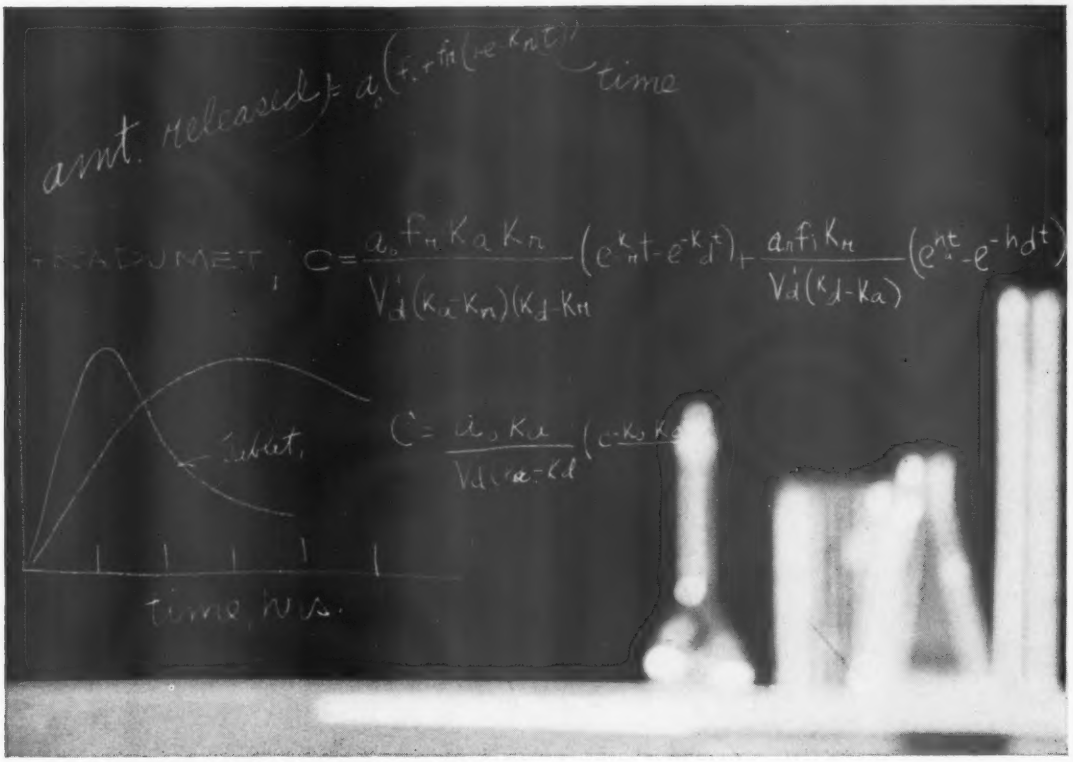
GRADUMET



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Smooth . . . steady . . . sustained. This is the Gradumet® Principle in action. And it's a mathematical fact: *In laboratory tests, the release pattern of this ingenious, new vehicle is so precise it can be expressed as an equation.*

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Acetophenetidin	150 mg.
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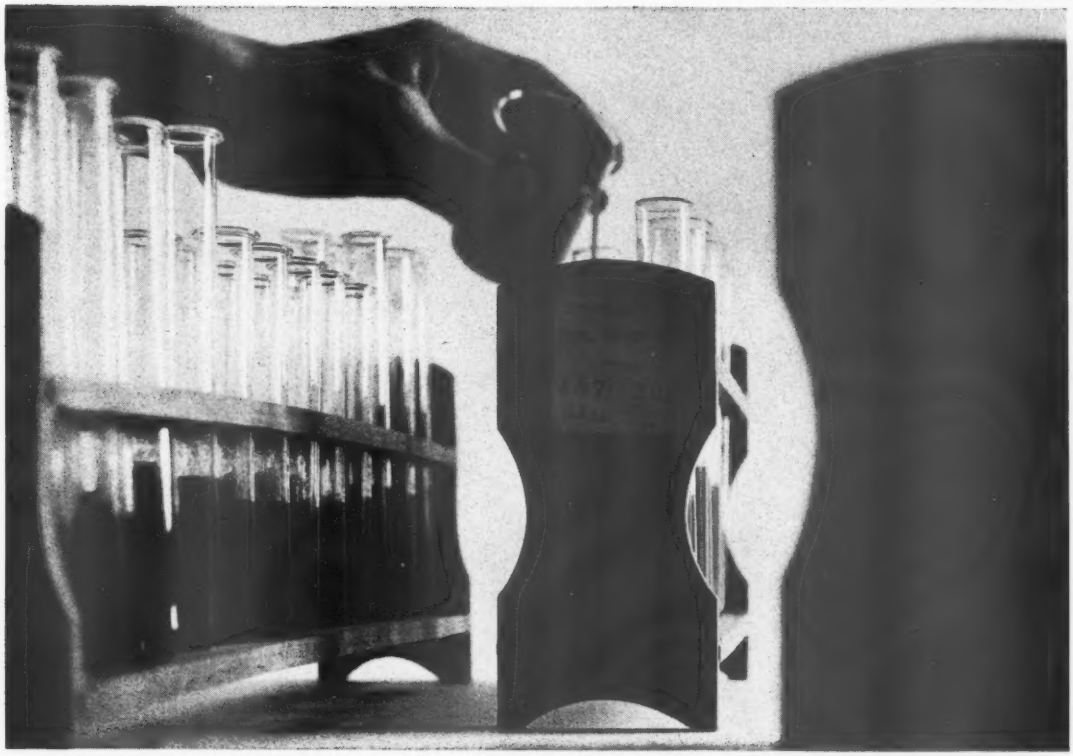

A Release Pattern So Uniform

it works the same in the presence of G. I. fluids, distilled water or tomato juice

An odd test? Consider the results. Desbutal® Gradumet® was added to solutions ranging from pH 1.2 to pH 7. The tomato juice was included partly because of its viscosity, partly because of its acid pH and partly because we wanted to see what would happen. Analytical determinations were made at hourly intervals.

The result? In every case, a uniform release pattern was evidenced. Which points up one of the important characteristics of new Desbutal Gradumet:

Individual differences in gastro-intestinal secretions, enzymes or motility in no way influence amount or duration of drug release. The active ingredients—Desoxyn® and Nembutal®—are leached from the Gradumet at a measured rate over the day. And at day's end —the empty Gradumet is excreted harmlessly in the stool.

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In all grades of hypertension, Serpasil may be used as a background agent. By permitting lower dosage of more potent antihypertensives, Serpasil minimizes the incidence and severity of their side effects.

CIBA
SUMMIT, N. J.

*Coan, J. P., McAlpine, J. C., and Boone, J. A.: J. South Carolina M. A. 51:417 (Dec.) 1955.

Complete information available on request.

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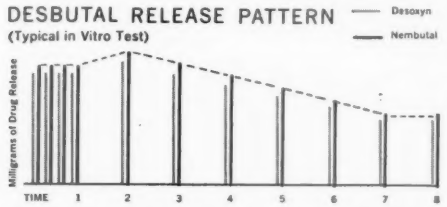
A Release Pattern So Carefully Synchronized

each half releases its own drug in "harmony" to the other (no more "peaks and dips")

With the precision of a finely-made watch, the long-acting Gradumet is timed to expel its drug contents throughout the day.

Desbutal® Gradumet® consists of two halves (Desoxyn® and Nembutal®, each in its own matrix) which are fused to form an inseparable, single tablet. Each half is specially-engineered with its own release rate to insure that the combined effect is harmonious in onset and decline. See chart.



40% of the drug contents of the Desbutal Gradumet is leached out within the first hour. Release of remaining drugs continues during the following seven hours. Dotted line shows the smooth, steady release pattern.

Note the absence of "spread" between the two drugs over the 8-hour period. This insures that an optimal ratio of the two ingredients will be made available to the patient at all intervals during the day.

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against secondary infection

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A Release Pattern So Subtle

your "nervous eater" will scarcely know she's taken "medicine" (except in her bright, new feeling of confidence)

Ask your patient for a report within a few days. Check her appetite . . . see if she doesn't feel calmer, more optimistic. Especially, look for the absence of unwanted drug effects.

You can expect these good results because the release rate of new Desbutal® Gradumet® is so ingeniously timed that "jolts" or "dips" are practically impossible. Approximately 40% of the component drugs (Desoxyn® and Nembutal®) is released during the first hour; thereafter, release continues at a rate roughly 8% per hour. Your patient gets medication at all times—but so smoothly and subtly that she'll never be conscious of an undesired "drug effect."

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in cough control, too—

each component contributes to the efficacy of

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potent antihistaminic—relieves nasal stuffiness, sneezing, lacrimation, itching, and bronchial congestion

proved expectorants—liquefy and loosen tenacious mucus...help clear the respiratory tree

time-tested antispasmodic—decreases bronchospasm; helps quiet the cough reflex

palatable demulcent—raspberry-flavored syrup soothes raw, irritated throat membranes...pleasant taste is readily acceptable to patients of all ages

BENYLIN EXPECTORANT contains in each fluid-ounce:

Benadryl® hydrochloride (diphenhydramine hydrochloride, Parke-Davis)	80 mg.
Ammonium chloride	12 gr.
Sodium citrate	5 gr.
Chloroform	2 gr.
Menthol	0.1 gr.

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ALASKA MEDICINE

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Vol. II
1960

MOUNTAIN MEDICINE: Comments on the Rescue of Climbers on Mount McKinley in May 1960

RODMAN WILSON, M.D.
ANCHORAGE

On May 17, 1960, four experienced mountaineers from Seattle, Washington, were injured in a fall down an icy slope high on Mount McKinley, Alaska's 20,320 ft. peak. I was a member of an Anchorage climbing party coming down from the summit at the same time. We were nearby quite by chance. In the ensuing week the four injured men, a seriously ill woman climber in our party, and an ill man in a ground rescue party were evacuated from the mountain under difficult, dangerous conditions.* I learned a lot about the care of the ill and injured in the mountains during this dramatic week.

I discovered, for instance, that any injury or illness, even a minor one, can be potentially of utmost seriousness when weather is cold and air is thin. The woman in our party, for example—a climber of experience and stamina—had suffered from the minor annoyances of acclimatization for about ten days during out ascent from 8,000 ft. elevation to 16,000 ft. She had had listlessness, headache, nausea and vomiting. These would undoubtedly have abated had she returned to a lower altitude for a few days; but when she became trapped for several days in our high camp at 16,400 ft. as the four sound members of our party strove to help the injured men at 17,200 ft., a concatenation of minor disabilities conspired to make her dangerously ill. Vomiting worsened, and headache became agonizing. Dehydration, prostration, delirium and coma followed, all without cyanosis or respiratory distress, yet all due ultimately to the varied effects of hypoxia on every cell in the body. After four days we were finally able to lower our companion in an air-dropped akja* down a 40° ice slope to a 14,300 ft. snowfield where a bush pilot in an unprecedented (but soon to be surpassed) high-altitude air rescue flew her off the mountain. Consciousness returned partially at 14,300 ft. and completely at sea level. Minor neurologic defects suggesting transient brain damage were present for about two weeks.

DR. WILSON

I learned, too, at first hand about another affliction of mountain climbers, namely, pulmonary edema. A strong, young, unacclimatized climber in the rescue party climbed rapidly from a level of 10,200 ft. to 14,300 ft. He then worked hard setting up the rescue camp at this elevation. On his third day in camp weakness, dizziness, shortness of breath and unproductive cough began. He was unable to stand unassisted and

*The story of the rescue was volubly reported in the press. Accounts appeared in LIFE, June 6, 1960, and in THE SATURDAY EVENING POST, Nov. 26, 1960.

*A litter of a type commonly used on ski slopes.

lay weakly, though fully conscious, in his sleeping bag. Respiratory rate was about 30 cycles per minute and pulse rate about 130 beats per minute. This man, too, was finally evacuated by air and quickly recovered. Unfortunately, an x-ray of the chest which might have demonstrated pulmonary edema was not taken. The clinical picture, however, was typical of the findings in this occasionally fatal syndrome, which is due either to acute left ventricular failure or to constriction of pulmonary veins due to hypoxia (1-4).

With respect to the injured party at the 17,200 ft. level, I quickly discovered how little a doctor can do in the way of definitive therapy on a mountain and learned how relatively unimportant, indeed, was the need for treatment in comparison to the elemental need for survival. One man had a fractured leg* and frostbite of the hands, another a mild concussion and frostbite of a hand, and two men had bruises of the neck, chest, and limbs, and minor cold injury of the fingers. I splinted the leg and dispensed a few anodynes and hypnotics—little more than first aid. I should not, perhaps, underrate the value of a doctor's ability in such a situation to assess extent of injury and determine prognosis. Further, the presence of a physician at the scene appeared to have comforted a lot of people at home and made good news copy. But the overbearing need on the mountain, at least in this accident, was not for narcotics (which I had), nor for plasma (which was air-dropped, but not used), nor even for oxygen (dropped and used), but simply for the means of survival and evacuation. And these means we had or soon acquired. They were (and are) in order of importance in my estimation:

THE WILL TO SURVIVE: This is of utmost importance and was abundantly present in the injured party. These were tough, determined men who had survived hardship and accidents in the mountains before. Morale was high and unwavering. No one ever expressed doubt that all would get off the mountain in some way or another, although the chances of rescuing the most seriously injured man seemed remote at times. The will to live breeds strength and ingenuity. Without it life would be short on Mount McKinley.

*Later more accurately determined to be diastasis of the tibia and fibula of one ankle and severe ligamentous tears of the other ankle.

SHELTER: Protection from wind and cold is vital if the injured or lost are to survive in the mountains of Alaska. Night temperatures were consistently below zero (F.) on Mount McKinley in May, 1960. An injured or ill man can easily freeze without a sleeping bag and a tent or a snow house. On the night of the accident one of the members of our party, in a prodigious display of courage and strength at the end of an exhausting climb to the summit of Mount McKinley, returned nearly 1,000 feet up the mountain to pitch a tent over the man with a broken leg. This man fortunately had had his sleeping bag with him at the time of his fall and had been placed in it by his less seriously hurt companions. But the additional protection of a tent on an icy, windy slope with a temperature below —15° (F.) may well have saved his life.

The importance of shelter was even more dramatically illustrated later, when at the 13,000 ft. level a rescue party was caught in a violent two-day windstorm, described by a veteran of Himalayan climbing as the worst storm he had ever seen on a mountain. One by one, small tents were shredded and uprooted by the howling wind, which sliced the hard-packed snow base away for a depth of two feet. Eighteen men finally wore out the storm holding down a heavy five-man army tent. Had this tent split, all might have perished. A snow house or cave is better protection against wind than a tent, but one cannot build an igloo in a one-hundred-plus mile-an-hour gale.*

HEAT, WATER, FOOD: Tree line in most of Alaska is between 2,000 and 3,000 ft. above sea level. For this reason climbers depend upon small gasoline or kerosene burners for heat, cooking, and melting snow for water. Much water vapor is lost from the lungs in the effort of climbing. Dehydration can easily compound fatique or complicate illness or injury. Fortunately, on this rescue a stove, fuel, and food were air-dropped by military aircraft at the 17,200 ft. camp on the second day, ending the problem my party had of carrying canteens of water up to the injured from our 16,400-foot camp (which we had to maintain because of the ill woman). The

*A weatherman in this party later determined from wind data that air velocity reached 135 miles per hour at a point (previously aptly named Windy Corner) just above their camp.

condition of all improved decidedly when water in an adequate amount, food, and heat were available. Now, with shelter, fuel, and food survival could be for an indefinite period of time.

EVACUATION PLAN: Climbers on Mount McKinley (which is in a National Park) are required to have a back-up party. If you don't come back, someone will begin looking for you. Both climbing groups had back-up parties, but it was particularly fortunate that our party carried with it the additional protection of a radio. McKinley is a tremendous mountain, flanked on all sides by some of the largest, longest glaciers in the world. There are no trails, no shelter houses. One cannot walk out for help in less than one or two weeks and likely could not walk out at all unroped to a companion. It is fearful to imagine what might have been the outcome had not we had a radio to communicate our plight at once. At best, the rescue would have been delayed by at least a week, perhaps with dire outcome for at least two climbers. Communications, thus, were vital in the rescue both at the outset and as the operation progressed. Air and ground rescue plans were initiated promptly and culminated in the dramatic air rescues from the 14,300 ft. snowfield and the incredible helicopter landings at 17,200 feet to pick up the two most seriously injured climbers. The ground party then reached 16,400 feet to escort the remaining two Seattle men down the mountain.

Fortunately, despite the recent inactivation of the 71st Air Rescue Command in Alaska, the personnel, aircraft, and equipment for rescue were still at hand in Alaska in May, 1960. In point of fact, at this very time, rescue forces were in the process of reorganization into the Alaska Rescue Group, a joint venture of the Mountaineering Club of Alaska and the Denali Ski Patrol with the cooperation of the Armed Services and the Civilian Air Patrol. It was essentially these groups, together with other local volunteer fliers and climbers and a large contingent of capable mountaineers from rescue groups in Washington and Oregon which effectuated the rescue, tragically marred by the loss of the lives of two volunteer civilian fliers who crashed in their light plane at the 17,300 ft. level.

FIRST AID AND SPECIFIC MEDICAL THERAPY: When survival itself is a problem, first aid and definitive medical care are of secondary importance. Short of measures to stop serious hemorrhage or to support breathing, medical measures in the mountains can often do no more than relieve pain, allow sleep, and raise morale. Infection can sometimes be treated. Further cold injury can be prevented by proper instruction and supervision, but little can be done in the mountains to treat frostbite already sustained. (How appalled I was to find the man with the concussion sleeping with his ungloved hand out of his bag in below zero (F.) weather!) The aim of almost all treatment under such conditions should be to stabilize injury or disease if possible and to evacuate for proper care at once.

These, then, are the elements necessary for survival and rescue of the ill or injured in the mountains or other vastnesses of Alaska. Their individual importance can be evaluated relatively, but this is specious in a sense for they are inseparable and none is unimportant. All conspire to lead either to defeat or to success in a rescue operation.

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THE PREVENTION OF TUBERCULOSIS

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In the absence of a highly effective vaccine against tuberculosis or even of a good immunity as a result of recovery from one attack of this disease, its control has had to depend upon isolation and treatement of all active cases. The success of chemotherapy has led naturally to the hope that the same drugs could also be used to prevent tuberculosis. Isoniazid (INH) lends itself well to this purpose, being inexpensive and effective in relatively small doses.

The first effective drug against tuberculosis, streptomycin, did not prevent children from developing meningitis while still under treatment for other forms of tuberculosis. However, Dr. Edith Lincoln called attention to the fact that INH treatment did protect them completely from that fatal complication. The first planned clinical trials of INH prophylaxis in this country were based upon her observation. They were carried but by the Public Health Service in 32 cooperating centers on 2,750 children between January 1955 and the end of 1957. In summary, these trials showed a good protection of infected infants under one year of age against tuberculosis, but a less definite effect upon older children and against other manifestations of progressive tuberculosis.

The prevention of tuberculosis by medical means can be divided into **primary prophylaxis** to prevent the original infection and **secondary prophylaxis** to prevent the development of active disease. A subdivision of the secondary types is the prevention of sequellae such as meningitis complicated active primary tuberculosis. It is important to remember that children with a positive tuberculin reaction do not have active primary tuberculosis unless there is additional evidence of disease and that their prognosis is generally good.

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Primary or Infection Prophylaxis

In animal experiments a sufficient dosage of infecting organisms has resulted in tuberculous infection in spite of daily administration of INH in the drinking water or food. It is difficult to suppose that human populations will take their medication as regularly. There have been few studies reported of primary chemoprophylaxis in humans. They require the daily administration of medicine to large numbers of people in their homes for an indefinite period of time. In the Phipps Institute study made with the support of the Indian Health Division of the U. S. Public Health Service in New Mexico in 1955-57 a daily

dosage of 5 to 10 mgm/kg of INH for a year did not protect 2200 Indian children from tuberculous infection as compared to 2300 similar children taking placebo pills. The U. S. Public Health Service is now engaged in a similar controlled study of chemoprophylaxis in 70,000 tuberculosis contacts and institution inmates of whom 35% are negative to tuberculin. It is hoped that this large study will tell us more about the possibilities of primary chemoprophylaxis.

Obviously it is more expensive and less acceptable to give pills daily to all the uninfected for long periods of time than to "treat" the infected. Not more than 70% will continue taking pills for as long as 6 months and possibly 50% for a year. Therefore, unless a way can be found to incorporate a more potent and still harmless antituberculosis agent in our drinking water or into wheat flour, this remains an impractical method as compared to vaccination which sets up a durable immunity against virulent infection by one shot or dose.

Secondary or Disease Prophylaxis

When the individual is already infected, and therefore tuberculous, administration of INH may be considered a form of treatment. Certainly when it is given to infants or children with X-ray evidence of hilar or parenchymal lung tuberculosis it is prophylaxis only insofar as it serves to prevent sequellae. These children should or would be treated anyway. The first cooperative clinical trials, referred to above, showed that a year of INH treatment did indeed reduce the incidence of meningitis and miliary tuberculosis.

A comparison of the INH treated Indian children in New Mexico with those given a placebo showed that neither group developed any progressive or fatal tuberculosis. Children with X-ray evidence of tuberculosis were excluded from this study. Their average age was 9 years. Of 320 children with a positive reaction (over 5 mm. to 5 TU PPD) initially, 48 reverted to negative after a year of INH, while only 9 of 252 reactors reverted on the placebo. Moreover, the average diameter of induration to the same dose of tuberculin decreased from 12.4 to 11.6 mm. on INH but increased from 14.9 to 17.1 on placebo. It is believed that INH may have reduced the number of organisms producing antigen in these treated children. All are being followed to determine whether a year of chemotherapy has had a good or a bad long-term effect. The large Public Health Service study of contacts now in progress will afford more information about secondary prophylaxis.

Conclusions

From the evidence now available the following conclusions are warranted:

1. The ultimate prevention of tuberculosis is still based upon finding and treating thoroughly every case of active tuberculosis. Chemotherapy has the major role in this and the family physician has a central responsibility for both detection and continued treatment.

2. BCG vaccination is still valuable for primary protection of uninfected infants, children and young adults who may be unavoidably exposed from time to time to tuberculosis. The statement about the indications for BCG by the Surgeon General's Committee should be consulted.

3. Chemoprophylaxis against first infection with tuberculosis is limited in value to laboratory emergencies and short term hazards in the home or hospital for immediate protection.

4. Chemoprophylaxis against tuberculosis disease is indicated for all infants under the age of 3 years having a positive tuberculin reaction and for older children with conversion to positive within the previous year. Large reactions (over 10 mm. of induration) and certain dangerous ages (adolescent females) furnish secondary indications for a year of daily INH treatment.

5. The family physician and the pediatrician remain the keys to the future prevention of tuberculosis.

FROSTBITE:

Experience with Rapid Rewarming and Ultrasonic Therapy

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ANCHORAGE

PART II*

In Part I of this paper, "Alaska Medicine," March, 1960, the general methods of treatment were described for those cases directly under our care. The background of knowledge concerning cold injury was briefly reviewed. In this portion of the paper, experience with fifty-one cases of frostbite is described. Of these, forty-one were treated directly by the senior author (WM) as either the attending or consulting physician. The remaining cases were drawn from the file of the Alaska Native Service Hospital or from Providence Hospital, Anchorage.

The majority of those patients not directly treated were followed by one of us as an interested observer. Only three of the total series were not seen by at least one of the authors. Hospital records were very carefully studied and any pertinent information was abstracted from them. The patients themselves were, if possible, interviewed at length concerning the cause of their exposure, the character of their exposure, and resulting symptomatology. All data which was considered of any possible value in the epidemiologic or clinical study of this injury was compiled. Only that information considered to be of general interest is presented here (Table I). Six cases of minimal to severe cold injury to the ears were not included in this series.

Group Characteristics

Table II outlines the racial and age distribution of the affected group. The majority of patients are, as one might expect, in the fifteen to forty-five years age range. It is of interest that Caucasian and Native patients are almost comparable in number. (Throughout this paper Native will be understood to refer to those of Aleut, Eskimo, or Indian extraction.) The appearance of only two cases of frostbite in Caucasian women is understandable in view of the infrequent exposure of this group.

TABLE II
Age and Race Distribution

	Caucasian		Native	
Age	Male	Female	Male	Female
0-15	1	0	1	1
15-30	9	0	6	5
30-45	9	1	5	2
45-60	5	1	4	0
61-	1	0	0	0

In Table III the Caucasian and Native groups are listed according to cause of injury. The classification of "insidious" includes those cases of frostbite occurring inadvertently with the subject unaware of the severity of the cold exposure. This is as opposed to that group where exposure was appreciated but could not be avoided. A separate classification is given to include that group exposed as a result of alcoholic intoxication. They

TABLE III
Cause of Injury by Race

Cause of Exposure	Caucasian	Native	T'tl
1. Insidious	1	3	4
2. Involuntary (Accidental)	18	14	32
a. Aircraft accident	3	2	
b. Land vehicle breakdown	3	0	
c. Hunting or trapping	5	4	
d. Injury at work	1	0	
e. Assault	2	2	
f. Runaway dog team	0	3	
g. Fell through ice in river	0	3	
h. Other	4	0	
3. Alcoholic Stupor	8	7	15
a. With assault		3	
Total	27	24	51

*These studies were aided by Contract Nonr-3183(00) (NR 105-249) between the Office of Naval Research, Department of the Navy, and William J. Mills, Jr., M.D.

represent an individually large class and apparently a serious health hazard in this state.

Table III demonstrates some expected findings. These include a preponderance of Caucasian injuries in those exposed through truck or automobile breakdown or accident, and of Native injuries from runaway dog teams or from penetration of ice while crossing rivers or lakes covered by overflow. A number of unexpected findings occur, however, including the majority of insidious injuries revealed in Natives. This is somewhat contrary to the common conception that these people are highly experienced and therefore less liable to sustain cold injury of this type.

The assault group included those rendered helpless or unconscious by attack. Most of these were female, and most reported flight after the assault in sub-zero weather, inadequately clothed, with average exposure of from thirty minutes to two hours prior to obtaining aid or rewarming.

In all the above, exposure for most patients was at temperatures well below —20 degrees Fahrenheit or, in a few cases, in the range of just above zero accompanied by high winds.

Classification of Injury

In attempting to evaluate the end results of the cold injury, a scheme of classification in roughly progressive degrees of severity was chosen as outlined in Table IV. Generally, the degree of restoration of function of the injured extremity should be considered the most important measure of result. However, although many of these patients have been followed for several years subsequent to their injury, the most recent sustained injury only one month prior to this writing. It is not possible to completely assess functional results at this time, since we were not able to see all of these patients for a proper follow-up. Too, the results are in some cases taken from descriptions rendered by other physicians, and these patients have not as yet been completely evaluated in terms of our classification. To be objective, in measuring severity of injury, the classification is based entirely upon anatomical grounds.

TABLE IV

Classification of Degree of Ultimate Injury

A—No recorded or demonstrated residual
B—Dysesthesia
  Intrinsic muscle atrophy
  Skin loss requiring replacement skin cover
  Limitation of joint motion greater than 25%
C—Phalangeal amputation, any level, three or less
D—Phalangeal amputation, any level, four or more
  Complete phalangeal loss at metacarpal or metatarsal—phalangeal junction
  Major amputation of the extremity

The "A" Group includes only those patients without recorded or demonstrable residual. In those cases treated by the authors, no case of significant cold injury was found which did not have some residual, even though minor. Therefore, this group contains patients mainly treated by others. Group "B" contains those patients demonstrating any dysesthesia, or any sensory disturbance including hyperalgesia, hypesthesia, paresthesias, or causalgia. Also grouped in this "B" category are those cases demonstrating intrinsic muscle atrophy, skin loss requiring replacement, or limitation of joint motion greater than 25% of the normal range.

TABLE V

Severity of Injury by Race

	A	B	C	D
Caucasian	2	14	6	5
Native	2	12	6	4

Group "C" includes those patients who usually demonstrated all of the above but who sustained anatomical loss not exceeding three phalanges.

Group "D," on the other hand, consists of those who had tissue loss greater than Group "C," and in general represents those whose amputations are significantly handicapping. In the majority of cases, the Group "D" result amounted to the loss of a foot or lower leg, often bilateral (or separation at the metatarsal-phalangeal junction). Throughout the paper these specific groups of injury are used in evaluating the results of diverse methods of thawing and treatment. They represent our best measure of the treatment method and the subsequent end result of the injury.

Results

In Table V the net results, in accordance with the above classification, are tabulated for Caucasians and Natives. There is no significant difference between these two groups. It is seen that there are only four patients in Group "A." These, as noted above, were not in the authors' treatment series. Such patients so described by others, who were re-examined by us, were invariably found to demonstrate some residual limitation of motion or neurovascular loss. These were classified then in

Group "B." It is our conclusion that if actual tissue freezing occurs, even though the injury is relatively superficial, some demonstrable objective or subjective residual will persist indefinitely.

TABLE VI
Degree of Injury vs. Intoxication

	A	B	C	D	Total
Intoxicated	1	8	4	3	16
Not Intoxicated	3	18	8	6	35

Because of the many loose statements and multiple theories regarding the effect of alcohol on frostbite, before and after exposure, Table VI has been included. There appears no significant difference in the distribution of intoxicated or non-intoxicated patients when classified by degree of injury. It is obvious from individual case histories that many of those who were intoxicated and sustained frostbite presumably would not have received this injury had they been aware of their environment and able to care for themselves.

In Table VII the subjects are classified according to anatomical areas of injury, race and final result. It is seen that the feet are involved more often than other sites, and are particularly likely to be involved bilaterally and often symmetrically. It is apparent from individual cases that involvement of the feet often occurs first,

TABLE VII
Anatomical Site of Injury

Area of Injury	Cauc	Nat	Ttl	A	B	C	D
H, F, Bilat.	3	5	8	0	3	5	0
H, Bilat.	3	1	6	0	3	2	1
F, Bilat.	16	11	27	0	18	4	6
H, Unilat.	1	3	4	2	2	0	0
F, Unilat.	1	2	3	2	0	0	1
OTHER	1	2	3	0	1	1	1

followed by injury to the hands. This is the usual occurrence in those wearing the standard type of winter clothing, who sustain severe exposure with body cooling.

The preponderance of Caucasian subjects with involvement of both hands only is interesting. This appeared as a result either of accidental loss of the hand covering due to wind, of loss in the course of the accident preceding the cold trauma, or of a lack of proper hand cover prior to cold injury. It is of further interest that the majority of major amputations of those subjects falling in Group "D" sustained foot injuries. Cold injury to the hand rarely produced more than isolated phalangeal loss. (Caucasian-Native racial variation, particularly regarding hand injuries, will be discussed in Part III.)

Variation of Result by Method of Treatment

The treatment of frostbite as advanced by the authors in Part I of this paper consisted of the rapid restitution of body temperature by warm oral liquid intake and a warm total bath when this was possible, which was seldom. This was followed immediately or concurrently by the rapid rewarming of the affected part by submersion in a water bath, 110 to 118 degrees Fahrenheit, preferably in a whirlpool. Treatment thereafter utilized whirlpool baths containing pHisohex® solution once or twice daily at body temperature. In some cases the use of ultrasound was combined with the whirlpool bath.

Initially antibiotics were utilized for the first two weeks of therapy. The choice of antibiotic varied. Our particular choice had been that of a combination of streptomycin and penicillin. In recent cases no antibiotics have been used in the treatment of these patients, unless the presence of infection was identified.

All attendants, particularly in the early stages, were required to wear clean gowns and face masks. In all our cases, the treatment of the injury was by the open method, without the use of occlusive dressings or ointments. It was found that some time after the fourteenth through the twenty-fourth day, with much variation in this time, sufficient drying of the tissues occurred so

TABLE VIII
Results by Type Hospital Treatment
Authors' Method vs. All Other

	A	B	C	D	Total
Full F.B.R. Program (R.R., U.S., W.P., P.T.)	0	6	1	0	7
U.S., W.P. & P.T.	1	4	2	1*	8
W.P. & P.T.	1	4	1	0	6
Total Above	2	14	4	1	21
Other Methods	2	12	8	8	30

* See Text

that clean sheets or drapes might be substituted for the sterile cover.

The investigators had very little control of early treatment in most of the subjects available for study. Patients are categorized by the type of treatment received in Table VIII.

Seven patients received the full treatment as outlined. Six of these could later be classified in Group "B" and one in Group "C." The second group noted above consisted of eight patients who were allowed to warm by being placed in a warm room, but who were seen soon after, and received whirlpool, ultrasound and physical therapy. This resulted in one Group "A", four Group "B", two Group "C", and one Group "D".

Six patients received neither rapid rewarming nor ultrasound, but did receive the essentials of the program which consisted of open treatment with daily whirlpool and physical therapy, and this resulted in one Group "A", four Group "B", and one Group "C". The totals of these three groups are tabulated and compare in number with the total patients treated by other methods (thirty in number) wherein there was much greater anatomical loss. Of these, a greater percentage fell in Group "C" and "D" and this is a statistically significant difference.

The initial treatment of this series of patients varied widely depending upon where and by whom they were first seen. Of the total of fifty-one subjects, only seven were treated by "rapid rewarming." In many cases, of course, the extremity had thawed and risen to near body temperature by the time the patient reached trained medical aid. This occurred either during the period of rescue, transportation, or while awaiting examination or treatment in a warm room. One case* thawed his own feet by exposing them to dry heat from a diesel generator exhaust. This case resulted in bilateral amputation of the tarsal-metatarsal junction. The tissue temperature is apparently readily raised to a lethal level when the injured tissue is not being perfused with blood.

Six subjects were thawed by immersing the foot in snow or ice water to achieve slow thawing (Table IX) in accordance with principles widely advocated in the past and by some authorities today. It is important to note that though this is a small series, half of these patients sustained major amputation, that is, fell in Group "D", and two-thirds, or four, of them sustained some anatomical loss. By comparison, of the patients treated by "rapid rewarming," or of those allowed to thaw at room temperature, less than 10% sustained major amputation, and only approximately one-third demonstrated any tissue loss. Despite the small number of cases, this is in accordance with

TABLE IX
Result by Method of Initial Treatment

	A	B	C	D
Rapid rewarming (water bath 110°-120° F)	0	6	1	0
"Thawing" with ice, snow or ice water	1	1	1	3
Other means, predominantly room temperature	3	19	10	5
Excessive dry heat	0	0	0	1

the general findings in animal experimentation. Although the proportion of those sustaining no anatomical loss in the group with "rapid rewarming" is considerably greater than that among those thawed at room temperature, the differences are not statistically significant in this small series.

Patients not treated directly by the authors received a variety of treatment. This included whirlpool and physical therapy in some cases, while others were treated with occlusive dressings, and a few with either anti-coagulants, vasodilators, or sympathetic block. None of the last were used on a sufficient number of patients to warrant statistical consideration.

Two major categories of treatment consisted of the "Open" as opposed to the "Closed" method. The "Open" method is defined as treatment using absolutely no cover, or dressing of any kind. The "Closed" method is descriptive of the utilization

TABLE X
Result by Whether Closed or Open Treatment Was Used—All Cases

	A	B	C	D
Open method (no cover)	2	17	4	2
Closed method (occlusive dressing)	2	9	8	7

of occlusive dressings, with or without ointments or salves, moist dressings, or incorporation of the part in plaster of Paris. Twenty-five patients were treated with the "Open" method, and of these, six sustained anatomical loss (Table X). In this group were two major amputations. On the other hand, twenty-six patients were treated by

"Closed" methods, and of these fifteen had sustained anatomical loss with seven major amputations. Cause for this difference, which appears significant, is discussed later, but a portion of the

TABLE XI
Days Hospitalized by Method Treatment

Days Hospitalized	Open	Closed
0- 10	3	5
11- 30	4	0
31- 60	8	6
61-120	7	5
121 or more	3	10

difference appears to be in the dissimilar incidence of infections utilizing the two methods.

Deep cellulitis appeared more frequent in the "Closed" method of treatment. This difference is

Table XII
Result by Presence or Absence of Infection, Any Severity

	A	B	C	D
Without infection	3	18	1	2
With infection	1	8	11	7

reflected in the somewhat longer hospitalization of the severely injured patient (Table XI).

Important to the final result, as evidenced by this series of patients, was the presence or absence of infection (Table XII). For this separation, infection was considered to consist of any demonstrable evidence of purulent material, regardless of amount, and was, in most cases, demonstrated by bacteriological culture.

TABLE XIII
Result of Use of Debridement

	A	B	C	D
Without debridement	3	20	0	3
With debridement	1	6	12	6

In Table XIII the subjects are tabulated without regard to other features of their treatment, initial or late, to demonstrate the relationship of debridement to result. The distribution is seen to correspond closely to the previous table, Table XII. Debridement was considered to mean intervention surgically, by isolated or periodic removal of superficial tissues with any instrument, but not amputation. Rupture of the blebs mechanically was considered debridement.

In order to determine the features responsible for this apparent relationship, the subjects were again re-classified (Table XIV). This classification was arranged to distinguish between those in

Table XIV
Debridement and Infection vs. Result

	A	B	C	D
Not debrided and not infected	3	16	0	2
Not debrided and infected	0	4	0	1
Debrided and not infected	0	2	2	0
Debrided and infected prior to debridement	1	3	2	1
Debrided, without prior infection and infected subsequent to debridement	0	1	8	5

which debridement was performed because of severe infection and those in which infection was not prominent at the time of debridement but followed the procedure. We feel that this tabulation is important.

It will be seen that good results generally were obtained in those patients who (1) were neither infected nor debrided, (2) were infected but not debrided, (3) were debrided but not infected. On the other hand, poor results were obtained in those patients who were infected and debrided, or in a fairly large group of patients who were debrided and developed infection following debridement. It should be noted here that of twenty-six patients of all types not treated by debridement, only three sustained significant tissue loss. Of seventeen individuals not infected at the time of debridement, fourteen, or all but three, suffered significant tissue loss and five sustained major amputation.

We consider it overwhelmingly demonstrated here that of all the factors in the treatment of frostbite which may influence the result, premature surgical intervention by any means, in any amount, is by far the greatest contributor to a poor result of any variable analyzed.

An attempt was made to evaluate the method utilized by the authors in regard to the number of infections sustained during the course of treatment. For this purpose, the series was divided into three categories, to include those treated by our methods, those treated by other methods but utilizing whirlpool bath, and those utilizing any treatment excluding whirlpool.

Initially the patients were classified as demonstrating the absence or presence of infection. When so presented, this series of subjects demonstrated almost 50% infection regardless of treatment. However, when re-classified into superficial or deep, a marked difference appeared. This classification was not an arbitrary one, since those classified as superficial consisted of small, infected pockets, or pustule formation in the eschar or tissues adjoining it. Deep infections, however, invariably consisted of extensive cellulitis, with or without osteomyelitis. No patients were seen who fell between these extremes.

TABLE XV
Infection by Method of Treatment

	No Clinical Infection	Superficial Infection	Deep Infection incl. Osteomyelitis
F.B.R. Program	11	10	0
Other methods with whirlpool	3	5	0
Other methods without whirlpool	10	3	9

Results of this distribution are shown in Table XV. It will be seen that although both our recommended program and other methods which included whirlpool had a significant number of infections, these were entirely superficial. Other methods, however, without the use of whirlpool therapy, developed infection that quite often progressed to become deep, and usually resulted in serious tissue loss. Our clinical impression has been that daily whirlpool therapy with antiseptic cleansing solution is an effective method to prevent the development of a serious infection, and we feel this is confirmed by these results.

TABLE XVI
Original Estimate of Injury vs. Result

	Result	
	Superficial	Deep
Original Estimate		
Superficial	21	17
Deep	4	9

Table XVI represents our subjects, classified according to the original estimate of degree of injury, superficial or deep, plotted against the final estimate as measured by tissue loss. Superficial injury was defined to be injury limited to skin, corresponding to "first" and "second" degree injury of many writers. Deep injury involves tissues below the skin including muscle, tendons, nerves, blood vessels and bone. This is comparable to "third" and "fourth" degree injury. It is apparent from a glance at the figures that there is little correlation between the initial estimate of injury and the final result.

Most of the original estimates of the degree of injury were made by one of us (WM) who had considerable experience with frostbite. It is apparent that the judgment of the severity of injury soon after its occurrence is extremely difficult if not impossible. The further classification of frostbite, particularly in the initial stages, into "degrees" such as has been attempted by many authors, must necessarily be tentative, and unreliable. Further, it has no clinical usefulness apparent to us. We have accumulated no data that would indicate a variety of treatment methods dependent upon the diagnosis of depth of frostbite.

In Table XVII, the salient features of those patients falling in Group "D" are summarized. It is interesting that five of the patients had debridement followed by infection, and of this group one patient sustained bilateral major amputation prior to the fourteenth day. His course subsequently was followed by soft tissue infection at the amputation site, and osteomyelitis of the distal portion of the amputation stump. He required revision of both amputation sites due to persistent infection.

Two of these patients, involved in an airplane accident, sustained such injury, that amputation was performed in the absence of debridement or infection. In one, the vascular trauma was so great that all pedal pulses in the foot were absent and examination upon initial admission demonstrated a fracture dislocation of the ankle and the navicular, the latter remaining unreduced. As a lifesaving measure, and in order to obtain help for his companion, he had crawled with the above noted injury over eight hours, at least three and one-half miles down a mountainside in sub-zero weather in the Arctic. It is logical to assume that he sustained considerable vascular injury during this travel. His injuries included a fracture of the lumbar spine as well. In this particular case, spontaneous separation of the tissues occurred at the tarsal-metatarsal junction.

TABLE I

SUMMARY OF 51 PATIENTS STUDIED

Pt	Sex	Age	Race	Cause of Exposure	Complicating Factors	Anat. Area	Method of Thawing	Method of Treatment* RR	US	WP	PT	O	C	Imp	Deb	Infection	Group†
1	M	24	E	Insidious	Ment. deficiency	Fr-l	Delayed: Room Temp.			X	X		X	S	E	Superficial	B
2	F	16	E	Flight after assault	Inac. Pulmon. Tbc Gen. hypothermia	Fr-l, Legs r-l	" "			X	X		X	D		None	B
3	M	46	I	Alcohol		Hr-l	" "						X	D		None	B
4	M	21	E	Alcohol	Gen. hypothermia	Fr-l	" "		X	X	X	X		S	L	Superficial	C
5	M	31	E	Insidious Ice Fishing	Urinary tract Tbc (act.)	Fl	" "		X	X	X	X		S		None	A
6	F	8	I	Accident		Fr-l	" "						X	S		None	B
7	M	51	E	Alcohol	Gen. hypothermia	Hl	" "			X	X	X		S	E	Superficial	A
8	F	27	E	Alcohol		Fr-l	" "					X		S	E	Deep	C
9	M	19	A	Fishing		Hr-l, Fr-l	" "						X	S	L	Deep	C
10	F	17	E	Fell through ice crossing river		Fr-l	Thawing: Ice & Snow		X	X	X	X		D	E	Superficial	D
11	M	50	I	Fell through ice crossing river	Pulmonary Tbc active	Fr-l	Delayed: Room Temp.		X	X	X	X		S		None	B
12	M	23	A	Insidious	Old laceration med. mn left hand	Hl	" "			X	X	X		S		Superficial	B
13	M	42	I	Lost in blizzard, runaway dog team	2nd episode F.B. (15 yrs ago) blindness, cong(?) Gen. hypothermia	Hr-l, Fr-l	Rapid Rewarming Water Bath-Tub 118° F	X	X	X	X	X		D	L	Superficial	C
14	F	18	E	Fled in bare feet Assault	Sever Rh Ht disease with A.I.	Fl, Leg r	Rapid Rewarming Hot packs	X	X	X	X	X		D		None	B
15	F	23	I	Alcohol-Assault	Ge.n Hypothermia	Buttocks, thighs	Delayed: Room Temp.					X		S	E	Superficial	B
16	M	15	E	Fell through ice crossing river	2nd episode F.B. Pumonary Tbc act.	Hr-l, Fr-l	Thawing: Ice & Snow		X	X	X	X		S		Superficial	B
17	M	29	E	Unclothed in snow	Schizophrenia, org. brain syndrome	Fr-l	Delayed: Room Temp.						X	D		None	B
18	M	41	E	Aircraft accident	Fx lumbar spine Fx dislocation left ankle, dislocation left navicular	Fl, Leg l	" "			X	X		X	D		None	D
19	F	32	E	Flight from assault - Alcohol		Fr-l	" "		X	X	X	X		S		None	B
20	M	35	E	Runaway dog team	Starvation dehydration	Fr-l	Thawing Snow: H_2O		X	X	X	X		D	L	Superficial	C
21	F	44	E	Flight from assault - Alcohol	Inact. pulmonary Tbc	Fr-l	Rapid Rewarming Hot packs	X	X	X	X	X		S	E	None	B
22	M	36	E	Aircraft accident	Fx right tibia Fx right talus	Hr, Fr, Leg r	Delayed: Room Temp.						X	D		None	D
23	M	54	E	Runaway dog team	Starvation Gen. hypothermia	Hr-l, Fr-l	Thawing Ice Packs, Snow		X	X	X	X		D		Superficial	D
24	M	26	E	Trapping in snow storm		Hr-l, Fr-l, Ears	Delayed: Room Temp.						X	D	L	Deep	C
25	M	22	C	Vehicle accident	Loss of gloves and shoe packs	Hr-l, Fr-l, Ears	Rapid Rewarming (110-115°) Bath	X	X	X	X	X		D	L	Superficial	B

24	M	26	E	Trapping in snow storm		Hr-l, Fr-l, Ears	Delayed: Room Temp.					X	D	L	Deep	C
25	M	22	C	Vehicle accident	Loss of gloves and shoe packs	Hr-l, Fr-l, Ears	Rapid Rewarming (110-115°) Bath	X	X	X	X	X	D	L	Superficial	B
26	M	30	C	Vehicle breakdown	Gen. hypothermia mentally confused	Hr-l, Face	Rapid Rewarming Hot Baths	X	X	X	X	X	S		Superficial	B
27	M	42	C	Injury on trail	Fx left ankle Bimalleolar	Fr-l	Repid Rewarming WP (118° F)	X	X	X	X	X	S		None	B
28	M	16	C	Hunting accident	Open Fx left tibia Crawled 3 mi. to aid Gen. hypothermia	Fr-l, Knees, Legs	Delayed: Room Temp.				X	X	S		None	B
29	M	29	C	Insidious	History of old periph. vascu. dis.	Fr-l	Rapid Rewarming (Soaks - 115° F)	X	X	X	X	X	S		None	B
30	M	8	C	Exposure after assault	Gen. hypothermia	Hr-l, Fr-l	Delayed: Room Temp.			X	X	X	S	E	Superficial	C
31	M	42	C	Alcohol	Gen. hypothermia	Fr-l, Legs	" "					X	S	E	Deep	D
32	M	36	C	Found in snow alcohol	Gen. hypothermia	Hr-l	" "				X	X	S	L	Deep	C
33	M	42	C	Found in snow alcohol	Gen. hypothermia	Fr-l	" "					X	S	L	Deep	D
34	M	29	C	Hunting accident		Fr-l	" "		X	X	X	X	S		None	B
35	M	44	C	Bromide intox. alcohol	Mentally confused	Fr-l	" "		X	X	X	X	S		None	B
36	M	36	C	Alcohol	Hallucinating	Fr-l	" "		X	X	X	X	S	E	Superficial	C
37	M	41	C	Aircraft accident	Post injury psychosis	Hr, Fr-l	" "			X	X	X	S	E	None	C
38	M	69	C	Found exposed in snow, head injury	Chronic alcoholism	Hr-l, Knees	Thawed ice packs					X	S	E	Deep	D
39	M	32	C	Aircraft accident	Sprain left angle	Fr-l	Delayed: Room Temp.			X	X	X	S	E	Superficial	B
40	M	27	C	Aircraft accident	Fx ulner, right	Fr-l	" "			X	X	X	S	E	None	B
41	M	53	C	Trapping		Fr-l	" "					X	D	E	Superficial	C
42	F	51	C	Exposure, not properly clothed		Fr-l	" "					X	S		None	B
43	M	48	C	Changing truck tire		Hr	" "					X	S		None	A
44	M	23	C	Hunting		Fr	Ice packs					X	S		None	A
45	M	26	C	Hunting		Fr-l	Delayed: Room Temp.				X		S		Superficial	B
46	M	46	C	Alcohol		Fr-l	" "					X	S	E	Deep	D
47	M		C	Mt. climbing accident		Hr-l	" "					X	S	E	Deep	C
48	M	51	C	Mt. climbing accident	Diastasis (T-F) left Sprain right ankle	Hr-l, Fr-l	" "				X		S		None	B
49	M	28	C	Vehicle breakdown		Fr-l	(185° F) Excessive Dry Heat			X	X	X	D	E	Superficial	D
50	F	30	C	Alcohol		Fr-l	Delayed: Room Temp.			X	X	X	S		None	B
51	M	53	C	Alcohol		Hr-l	" "					X	S		None	B

*RR—Rapid rewarming
Imp—Initial impression of severity of injury, superficial or deep;
US—Ultrasound;
WP—Whirlpool;
PT—Physical therapy;
O—Open method;
C—Closed dressing;
Deb—Debridement.

†See Table IV

TABLE XVII

Features of Those Cases with Major Amputations

Case	Area	Age	Race	Assoc. Injury or Condition	Factors Preceding Amputation	Level of Amputation
10	Fr-l	17	E		Severe penetrating deep cold injury. Early demarcation, dry gangrene, left distal foot. Debridement followed by infection and retraction of tissues.	Trans-metatarsal left foot
18	Fl	41	E	Fx lumbar spine Fx-dislocation left ankle Dislocation left navicular	Vascular trauma incident to crawling on hands and feet 3-4 miles, 8 hrs. dragging L leg. Unreduced navicular dislocation.	Middle third left tibia. (Preceded by spontaneous separation tarsal-metatarsal junction)
22	Hr, Fr	36	E	Fx Metacarpal R hand Fx tibia (closed) R Fx talus, R	Cold injury superimposed upon multiple fx's, R lower leg. Vascular deficit.	Mid third right tibia.
23	Fr-l, Hr	54	E	Starvation Dehydration	Deep penetrating cold injury. Thawing with ice and snow water.	Bilateral metatarsal phalangeal junction (level of demarcation)
31	Fr-l	42	C	Alcoholic stupor	Debridement, infection, early amputation prior to 14th day, osteomyelitis	1) Proximal 3rd left tibia 2) Tarsal-metatarsal junction right
33	Fr-l	42	C	Alcoholic stupor	Multiple episodes "frostbite", cold exposure after alcoholic bout. Superficial infection, debridement, osteomyelitis and multiple phalangeal amputations	Complete bilateral phalangeal loss, all toes, L&R
38	Hr-l	69	C	Alcoholism Organic brain syndrome	Thawing, ice packs, early debridement, infection.	Phalangeal amputations bilateral, excluding thumbs.
46	Fr-l	46	C	Alcoholic stupor	Early debridement, early surgical procedures (grafts) infection, osteomyelitis	Bilateral proximal third tibial amputations
49	Fr-l	28	C		Severe penetrating cold injury. Thawed at excessive dry heat 165-185° F. Rapid deep demarcation, tarsal-met. junction.	Bilateral tarsal-metatar-junction

Amputation was performed at the mid-tibial level on a further patient, with such skeletal injury of tibia and talus, including interarticular injury, to preclude, in the opinion of the surgeon caring for him, a good terminal result. One other patient, whose extremities were thawed with ice and snow water, received such deep penetrating cold injury, and was without treatment for such a length of time, that spontaneous demarcation occurred. His loss was bilateral at the metatarsal-phalangeal junction. Another patient, with thawing by ice packs, had an unfortunate result involving both hands, with associated early debridement and infection.

The patient previously referred to, who thawed his feet in a diesel generator exhaust, underwent rapid demarcation with bilateral loss at the mid-foot. Despite excessive warming, he sustained, with the open method of following treatment and constant whirlpool therapy, no evidence of deep infection. After multiple skin grafts, he obtained a good functional result and required no further amputation.

Ultrasound

We have been interested in the utilization of ultrasound as a penetrating tool and an adjunct therapy in the treatment of frostbite. It has been used in these cases only in conjunction with whirlpool. The results of ultrasound at this time are inconclusive. Only recently have we attempted its controlled unilateral use in cases with bilateral symmetrical injury of hands and feet. An insufficient number of such control cases have been accumulated to draw valid conclusions (Table VIII). In this table eight patients received therapy, utilizing ultrasound, whirlpool and physiotherapy without "rapid rewarming."

Six others were treated very similarly, excluding the use of ultrasound. No marked difference is seen.

Editorial Page . . .

CHILD ADOPTION LAWS IN ALASKA

In the 1960 State Legislature House Bill No. 254 was introduced in an effort to revise the State statute concerning child adoption. The proposed revisions raised many controversies, and the bill was not enacted. All agree, however, that the existing statute needs modification, so that a "black market" in babies will not become established in Alaska. This is an abomination which present statutes do not curb. A new section of the Penal Code should forthwith be written by the 1961 Legislature to make such trafficking in human lives a criminal offense.

With respect to other revisions in the adoption law, there is virtually no reliable information concerning ratio of unsuccessful to successful adoptions in the past in Alaska upon which intelligently to base modifications. Some claim that arrangements between natural mother, doctor, adopting couple and lawyer with later perfunctory court ratification are entirely too haphazard and fraught with opportunity for misplacement of the child, favoritism toward particular prospective parents, exhorbitant payment of "expenses" by the adopting couple to the mother, and more than "usual" fees to the doctor and lawyer. Others believe, equally earnestly, that rigid control of adoptions by a single agency, such as the State Welfare Department, could lead to equally undesirable practices, such as the overuse of foster homes, which deprives a baby of the irrecoverable chance to be with new parents in the crucial first few formative months and years of life; ridiculous attempts to match children to parents by race and other physical characteristics; to observe the handicapped child for prolonged periods in a foster home; or to exclude older adoptive parents. This could equally lead to favoritism. An enlightened Welfare Department could control such tendencies and add measurably to successful early placement, but it is unlikely that a governmental agency would do this consistently because of the peculiarly obstipated and arrogating way in which any governmental agency invested with decisive power is wont to function.

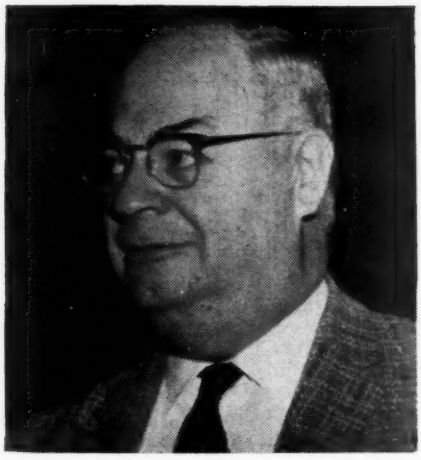
As physicians, we should value a social service investigation when appropriate, but we insist that the doctor's advice concerning the health and the genetic background of the child and the suitability of the prospective adoptive parents be most carefully considered. We submit that the interest of the child is the concern of natural parents, doctor, prospective parents, lawyer, clergyman and social agencies all, and that the magistrate or judge carefully consider their several opinions before ratifying an adoption.

The Booth Home of the Salvation Army in Alaska and the Inter-Agency Council in Anchorage are currently, among other groups, stimulating action in these important matters. Their efforts are to be lauded.

The pre-eminent need at the present is for exhaustive study of past experience with adoptions in Alaska and in other States and then thorough consultation between legislator, lawyer, judge, physician, clergyman and private and government social agencies. Only then can intelligent revision be written into the law. Haste is best made slowly in these matters so that a new law will be sound, not for a year, but for a generation, and so that Alaska's law may become a model and not merely a feeble facsimile of some other State's ancient statute.

RODMAN WILSON, M.D.
Asst. Editor

President's Page



Election day has come and gone and I believe we will all agree that organized medicine is still on the defensive. Of course that would have been true no matter which party had been successful, but the degree of defensiveness may have been somewhat different, who knows? Be that as it may, we must be vigilant and aggressive in all our programs. Your officers cannot do it all alone, no matter how hard they try, but you and I working in our own communities can accomplish a great deal.

I have on my desk a letter from the Tax Research and Legislative Agency, Inc., pertaining to the tax structure of our United States, calling attention to the loopholes in income tax laws. Did you know that of the personal income of residents of the U. S. two-fifths pay the heavy tax load while three-fifths go untaxed? Changes in legislation could easily cut back on the presently high tax brackets. I use this only as an example of the necessity for us to enter into the affairs of our community, state and nation.

All of us realize that the Health Department and the Section of Mental health of our state are in a precarious and very untenable situation brought about by a chain of unfortunate circumstances. Early this spring I discussed with Mr. Paul Winsor, Commissioner of Health and Welfare, the problems of the Health Department, offering him the services of our Association in an advisory capacity and as early as May, I was encouraged to believe we were going to get somewhere. Several months and considerable correspondence later we have just gotten our toe in the door. Elsewhere in this journal you will find a copy of a letter I have just received from Mr. Winsor. Probably before you read this I will have learned more as I plan to visit the Health Department offices and try to work out some details in which we can help.

There will undoubtedly be much legislation coming up in the sessions of our new legislature that will be of importance to us in the medical field. I have forwarded to Bill Whitehead information on the new "Federal State Programs for Health Care of the Aged" as that subject will no doubt come up in the near future. Many of our communities have elected new representatives to our legislative halls. It is not too early to be giving them our ideas and securing help for the health programs of our state and it certainly is up to us to furnish the ammunition for them.

Now, just a word about our next annual meeting to be held in the Sitka-Mt. Edgecumbe area next May 24th to 27th inclusive. We are well into the formation of a program which we feel will be of interest to all of you. We are stressing practicality in all presentations. If you have any suggestions please send them to me now as we expect to have the whole program firmed up in January. I can assure you that the session will not be a disappointment so make your plans early to be in Sitka May 24th to 27th, inclusive, and longer if you want time for fishing.

May I urge all committee chairmen to keep in contact with their committeemen and carry through on any actions requested of them at our last annual session. I realize that committee work, at the wide distances apart we find ourselves in Alaska, is difficult and time consuming, but we can't get everything done the few short days we are together once a year. We are requesting each chairman to present a written report, for in no other way can we keep a record in our archives of what we are trying to accomplish.

Many problems confront our association as well as all of organized medicine and I repeat we must all take an interest in them. I know that I for one have learned a great deal in the past few months about the machinery that makes the AMA run and the problems that exist. Our representatives in organized medicine are doing a good job, but they can do better if each of us support them wholeheartedly when we agree and let them know when we disagree.

Benjamin E. McBrayer, M.D. President

HEALTH COMMISSIONER'S LETTER TO DR. McBRAYER

November 7, 1960

Benjamin E. McBrayer, M.D.
President
Alaska State Medical Association
P. O. Box 370
Mt. Edgecumbe, Alaska.

Dear Dr. McBrayer:

Thank you very much for your recent letter concerning the needs of this Department for professional and advisory services. I had hoped to be able to get together with you and discuss your first suggestions in person, but this has not proved to be possible. It is indeed encouraging that you can name so many physicians who would be helpful to the Department.

Since the last time we corresponded on this topic, there have been some refinements in our thinking, and I would suggest that we add several members of the Alaska Dental Society to the group. While no formal status can be given to the professional advisory committee, it would seem of mutual benefit to us to exchange views at the annual conventions of the medical and dental associations. In addition, Department offices throughout the State would welcome visits from the committee or correspondence on matters of joint concern.

Tentatively, we feel that the medical liaison can be performed through Dr. William Whitehead, Juneau; Dr. Benjamin E. McBrayer, Mt. Edgecumbe; Dr. Robert Wilkins, Anchorage; Dr. Arthur Schiable, Fairbanks; Dr. Robert Shuler, Sitka; Dr. Ralph Carr, Ketchikan; Dr. Joseph Deisher, Seward; and Dr. Joseph Shelton, Anchorage.

As soon as similar suggestions can be received from the Alaska Dental Association, I shall write to each man named of the action we have jointly taken.

Sincerely yours,
/s/ Paul L. Winsor
Commissioner.

MEDICAL HISTORY OF WAR OFFERED

Many of the medical lessons learned during World War I had to be relearned under fire during World War II because of paucity of distribution of the World War I medical history.

Lieutenant General Leonard D. Heaton, the Army Surgeon General, in an endeavor to prevent this costly relearning process, in the unhappy event of another war, has directed the preparation, publication, and distribution of the "History of the Medical Department, United States Army, in World War II." General Heaton is particularly anxious that information of the existence and availability of this History be circulated widely among the profession, both military and civilian.

Of the 48 volumes programmed for the series, 15 have been published and can be purchased at modest cost from the Superintendent of Documents, Government Printing Office, Washington 25, D. C. The set of 15 volumes may be purchased for $66.50 or individual volumes can be obtained at remarkably low prices. Commanding officers of medical units may requisition copies for their Medical Units libraries by submitting DA Form 17 directly to the Historical Unit, U. S. Army Medical Service, Washington 12, D. C., ATTN: Promotion Branch.

Volumes now available are:

"General Surgery," edited by Michael E. DeBakey, M.D.

"Neurosurgery," Volume I (Head Injuries), edited by R. Glen Spurling, M.D., and Barnes Woodhall, M.D.

"Neurosurgery," Volume II (Spinal Cord and Peripheral Nerve Injuries), edited by R. Glen Spurling, M.D., and Barnes Woodhall, M.D.

"Hand Surgery," edited by Sterling Bunnell, M.D.

"Ophthalmology and Otolaryngology," edited by M. Elliott Randolph, M.D., and Norton Canfield, M.D.

"Orthopedic Surgery, European Theater of Operations," edited by Mather Cleveland, M. D.

"Orthopedic Surgery, Mediterranean Theater of Operations," by Oscar P. Hampton, M.D.

"Physiologic Effects of Wounds," edited by Fred W. Rankin, M.D., and Michael E. DeBakey, M.D.

"Vascular Surgery," edited by Daniel C. Elkin, M.D., and Michael E. DeBakey, M.D.

"Cold Injury, Ground Type," by Tom F. Whayne and Michael E. DeBakey, M.D.

"Dental Service," George F. Jeffcott, D.M.D.

"Environmental Hygiene," by James Stevens Simmons, M.D., and others.

"Personal Health Measures and Immunization," by John E. Gordon, M.D., Tom F. Whayne, M.D., and others.

"Communicable Diseases," Volume IV, by John E. Gordon, M.D., Joseph Stokes, M.D., and others.

"Hospitalization and Evacuation, Zone of Interior," by Clarence McKittrick Smith.

Muktuk Morsels

A column devoted to medical news in Alaska, compiled by

HELEN S. WHALEY, M.D.

GENERAL

The Fourth Annual Lederle Post Graduate Symposium will be held in Anchorage on Saturday, February 25th, at the Westward Hotel. This coincides with the Annual Anchorage Fur Rendezvous. The program has been arranged by Dr. Charles St. John. Guest speakers include Dr. George E. Shambaugh, Jr., Professor and Chairman of the Department of Otolaryngology of Northwestern School of Medicine. He will discuss the "Treatment of Otitis Media." Dr. David Figge, Assistant Professor of Obstetrics and Gynecology at the University of Washington School of Medicine is to discuss the "Management of Abortion". "Stress and Its Relationship to Lipoid Metabolism in the Human Body" is to be presented by Dr. Stuart G. Wolf, Professor of Medicine at the University of Oklahoma. All physicians in Alaska are invited to these sessions.

The Third Alaskan Heart Clinic was held in September, again in Anchorage and for the first time in Fairbanks. Approximately 120 children and adults were reviewed in Anchorage by the team of four visiting physicians from the Stanford University Medical School in Palo Alto, California, and the Presbyterian Medical Center in San Francisco. This group included Dr. Herbert Abrams, Radiologist; Dr. Herbert Hultgren, Internist; Dr. Frank Gerbode, Cardiac Surgeon; and Dr. Saul Robinson, Pediatric Cardiologist. The Clinic in Fairbanks was organized by Dr. Donald Tatum with the assistance of Dr. C. T. Marrow and was held at the Ladd Air Force Base Hospital. There were 31 patients seen.

A comprehensive article titled "Alaska, Frontier for Health Services," was published in the Public Health Reports of October, 1960. Most of the data for this article was compiled by Mrs. Rachael Simmet, special assistant to the Director of the Arctic Health Research Center in Anchorage. Her material was obtained from published and unpublished reports and records of staff members of State and Federal agencies and organizations. Her final conclusion is that Alaska's present major health problems—those coming from infectious diseases and lack of sanitation—will continue to claim priority for some time.

Much of Alaska's past progress in overcoming major health problems can be attributed to strong Federal support and increasing Territorial-State appropriations.

LOCAL NEWS

FAIRBANKS: Dr. Carl E. Boswell, who was formerly associated with Dr. Henry Storrs and prior to that with Dr. John I. Weston, has established his private office in Dr. Hugh Fate's former quarters in the Co-op Building. His practice is limited almost exclusively to internal medicine. The Fairbanks Clinic has a new general practitioner Dr. George Leih, previously of Phoenix, Arizona. Dr. Leih is a 1955 graduate of the University of Nebraska College of Medicine in Omaha and has two children. Dr. Joseph M. Ribar of the Fairbanks Clinic was recently elected Mayor of Fairbanks. The previous Mayor, Dr. Paul Haggland, was voted "the man of the year" of Fairbanks for 1960. Dr. Donald Tatum of the Tanana Valley Medical-Surgical Group and a Diplomate of the American Board of Internal Medicine, has been accepted as an Associate of the American College of Physicians. Dr. Felix Adams, previously of Vinita, Oklahoma, and a 1939 graduate of the Duke University School of Medicine is now associated with Dr. John I. Weston at the Doctor's Clinic.

St. Joseph's Hospital staff officers for 1961 include: President, Dr. Donald E. Tatum; Vice-President, Dr. Taylor Marrow; Secretary-Treasurer, Dr. Henry Storrs. The Fairbanks Medical Association elected officers at the December meeting. The new President is Dr. James A. Lund-

quist; Dr. Henry Storrs was elected Vice-President; Dr. William Bugh, Secretary; and Dr. Lawrence Dunlap, Treasurer.

Dr. and Mrs. Arthur Schaible have just returned from a two-month vacation through Europe. They spent considerable time in Russia where Dr. Schaible witnessed various surgical procedures. He will give a presentation on the techniques of chest and abdominal surgery in Russia at the next meeting of the Fairbanks Medical Association.

The Pan-Pacific Surgical Meeting in Hawaii and the American College of Surgeons meeting in San Francisco were recently attended by Dr. Henry Storrs.

PALMER: Dr. Vincent Hume is attending the University of California at Los Angeles General Medical Seminar from January 7th through the 22nd, which is being held in Mexico City and Guadalajara.

CHUGIAK: Dr. Marshall Simpson was in the South 48 from October 25th to December 4th. He attended the American Heart Association meeting in St. Louis and the American Medical Association meeting in Washington, D. C.

BETHEL: A 7 lb. 10 oz. girl was delivered to Dr. Jean Persons at Providence Hospital in Anchorage on Thanksgiving Day.

Dr. George Wagnon arrived in Anchorage during January in his recently purchased Cessna 180. He was enroute to Washington, D. C., to attend a post-graduate course in Public Health Administration.

NOME: Dr. John Barrow, III, with his wife and three children, arrived to assume the duties of Medical Director at the Maynard-McDougall Memorial Hospital. He is a graduate of the Vanderbilt University School of Medicine, where he also interned. The Board of Missions of the Methodist Church, which sponsors the Maynard-McDaugall Memorial Hospital, sent Dr. William J. Hillman, Professor of Orthopedics at the Vanderbilt University School of Medicine, to survey some of the medical problems during November, 1960. He was particularly interested in surveying the possibility of obtaining a grant for vocational rehabilitation studies in the Nome area. This hospital, which was originally established in the Gold Rush days by the Catholic Church, and later taken over by the Board of Missions of the Methodist Church, is the only private hospital in Western Alaska and serves the large geographical area between the Bethel USPHS Hospital to the south and the Kotzebue USPHS Hospital in the north. This is an extremely isolated area because of severe weather problems. In addition to providing medical care for the white population of this area, this hospital provides care to the Native population under a contract care basis with the U. S. Public Health Service.

KENAI: Dr. Marion Goble, who has practiced in the Kenai-Soldotna area for the past two years, left the area permanently in December, 1960, to return to New York. However, Dr. Paul Isaak is now providing medical service in the Soldotna area. It is hoped that in the near future funds will be available for a new clinic building and possibly for a small hospital. At present the nearest hospital facilities are Seward, Homer and Anchorage.

JUNEAU: Dr. Edwin O. Wicks has been appointed Acting Director of Public Health, Department of Health and Welfare, for the State of Alaska.

Numerous improvements have been made at St. Ann's Hospital under the capable administration of Sister Luca. Ford Foundation funds have been used to obtain the latest in anesthetic equipment, a physiotherapy department and a new emergency room. A hospital medical library has been started as a memorial to Drs. Blanton and Clements.

Dr. Jack Gibson is slated to assume the Presidency and Dr. Homer Ray will be Secretary-Treasurer of the combined St. Ann's and Juneau Medical Society.

ANCHORAGE: Officers for 1961 for the Anchorage Medical Society will be Dr. Winthrop Fish, President; Dr. Rodman Wilson, President-Elect; and Dr. Glen Crawford, Secretary-Treasurer. The new Providence Hospital staff officers include Dr. William Maddock, President; Dr. Robert Whaley, Vice-President; and Dr. Rudy LeLeong, Secretary-Treasurer.

Numerous meetings have been attended during the past three months by Anchorage physicians. Drs. Milo H. Fritz, Frederick J. Hillman and Lester A. Margetts, Jr., became Fellows of the American College of Surgeons at the San

Francisco meeting in October. Dr. Robert Wilkins was the first physician from Alaska to be elected to the Board of Directors of the American Heart Association. He attended the New York meeting in December. One of the five Alaskan delegates to the White House Conference on Aging, which convened in Washington, D. C., January 9th to 12th, was Dr. Francis Phillips. The Fourth Annual Cancer Conference was attended by Dr. Royce Morgan as the Alaska delegate of the Alaska Division of the American Cancer Society. This was held at the University of Minnesota, Minneapolis, in September. Dr. Duane Drake, Radiologist, attended a continuation course at the University of Minnesota on Radiation Therapy in October and another course at the Tumor Institute, Swedish Hospital, Seattle, in December. In the immediate future he is setting up the first X-ray therapy unit in Alaska. The first medical radio-isotope unit in Alaska was established at the Doctor's Clinic this Fall for the evaluation and treatment of such conditions as hyperthyroidism, malabsorption syndromes, polycythemia vera, etc.

Dr. Joseph Shelton became a registered big game guide this past summer. Dr. William J. Mills was elected to the American Academy of Orthopedic Surgery and the American Academy of Cerebral Palsy recently.

Dr. Robert Lewis, formerly of Glenwood Springs, Colorado, and more recently with the Boise Veterans Administration Hospital, has joined Dr. William Caughran and Dr. Calvin Johnson in general practice at the Spenard Clinic.

SAND POINT: The first doctor to be stationed in the Aleutian Island community of Sand Point, 600 miles southwest of Anchorage, is Dr. Carl Sandberg, who set up a medical clinic in November with the assistance of his wife, a nurse, under the auspices of the Alaska Baptist Conference. The work is being started with the financial aid of the Aleutian Cold Storage, New England Fisheries and Wakefield Fisheries. Dr. Sandberg was formerly an officer with the Alaska Public Health Service in Anchorage He is a graduate of the University of Minnesota Medical School. In the past, patients in this community were sent either to Kodiak or Anchorage for medical treatment.

CORDOVA: Dr. J. Ronald Brown entered practice in Cordova in October. He received his medical training at the University of Maryland and the University of Utah, receiving his M.D. degree at the latter institution in 1947. He practiced in California for a total of seven years and in Hawaii for the past two and a half years. For one and a half years in 1951-1952 he was the District Director of Public Health for the Marshall Islands District in the Trust Territory of the Pacific Islands. Dr. Brown has many hobbies and considers himself a general practitioner with "special interests" in almost every field. Prior to leaving Hawaii, he was collaborating with one of the High Talking Chiefs now living in Hawaii in the writing of a Samoan-English dictionary. He has eight children, the last of whom was born October 15th.

Dr. Joseph Tedesco, formerly of Cordova, has accepted a residency in ophthalmology.

NEWS OF GOVERNMENT SERVICES

UNITED STATES PUBLIC HEALTH SERVICE

Dr. Kazumi Kasuga, Area Medical Officer, recently attended the Annual Meeting of the Public Health Association in San Francisco and the Institute for Federal Hospital Administrators held in Washington, D. C.

Prior to this past summer, the Coast Guard vessel "North Wind," which visits many of the remote villages of the Aleutian Chain and the western Alaska Coast had a Coast Guard physician on board. However, these doctors are now assigned from the Public Health Service staff in Alaska. These physicians serve for a three-month tour. Dr. William H. James, formerly of Anchorage, and a graduate of the Ohio State University School of Medicine, Columbus, was the first USPHS physician assigned this duty direct from Alaska.

Dr. R. Wade Ortel was assigned to Kotzebue this past summer. He is a graduate of the University of Maryland Medical School and came from a surgical residency in Pennsylvania.

Dr. Evangelos Trahos, the radiologist at the Anchorage USPHS Hospital, and a confirmed bachelor for many years, was recently married.

During her annual summer leave, Dr. Gloria Park had her fourth child, a girl. She has been Director of the Outpatient Clinic for the past 3½ years.

UNITED STATES ARMY, ALASKA

The following are physicians currently assigned for duty with the United States Army in Alaska: At Fort Richardson—Colonel Francis L. Carroll, Chief Surgeon (Cornell University Medical College); Colonel Harry D. Offett, Jr., Surgeon (George Washington University Medical School); Lt. Colonel Donald S. Myers, Preventive Medicine Officer (University of Kansas School of Medicine); Major Ernest N. Moss, Chief, Physical Standards Section (Kansas City University of Physicians and Surgeons); Capt. Peter Reich, Psychiatrist (Harvard Medical School); Capt. Thomas Kelly, Chief, Pediatrics (University of Iowa); Capt. Allen A. Fujimoto (College of Medical Evangelists, California); Capt. Stanley Saperstein (Tulane University Medical School); Capt. William C. Riecke (Tulane University Medical School); Capt. Charles G. Stockard, Surgeon (University of Tennessee-PG); Capt. Gary L. Bannister (University of Nebraska - PG); Capt. Donald F. Terry, Surgeon (Washington University, St. Louis); Capt. Raymond L. Yockey (University of Illinois); Capt. Joe Clark Scoggin (University Medical Center, Jacksonville, Miss.); Capt. Ran L. Phillips, Surgeon (Duke University School of Medicine). At Whittier—Capt. Charles P. Floyd, Surgeon (University of Michigan). At Wildwood Station—Capt. Peter B. Webber, Surgeon (University of Vermont College of Medicine). At Fort Greely — Capt. Francis D. Oakes, Surgeon (Baylor University Medical School) and Capt. Meredith S. Hale (University of Maryland School of Medicine). At Ladd Air Force Base Hospital—Capt. James J. Bingham, Surgeon; Capt. Arthur M. McGuire (University of Minnesota Medical School); Capt. Donald R. Bjornson, Surgeon (University of California School of Medicine); Capt. David Miller, Assistant Surgeon (New York Medical College), and Capt. Robert L. Jensen, Surgeon (University of Utah Medical School).

5040th USAF HOSPITAL, ELMENDORF AFB

Colonel William F. Patient, AAC Surgeon and Colonel Levi M. Browning, Hospital Commander, attended the annual meeting of Hospital Commanders, held in conjunction with the annual meeting of the National Consultants to the Surgeon General in Colorado Springs, Colorado, from Nov. 7th to 9th, 1960. The general theme of the meeting was "The Art of the Practice of Medicine."

Meetings attended in recent months by physicians from the 5040th USAF Hospital are: Major James R. Upp, Chief of Pediatrics—the annual meeting of the American Academy of Pediatrics in Chicago; Major Randall L. Clark—the annual meeting of the American Academy of Ophthalmology in Chicago; Major Garth B. Dettinger and Capt. Robert M. Dean—the annual convention of the American College of Surgeons in San Francisco; Major Charles F. Krecke, Chief of Radiology—the annual meeting of the Radiological Society of North America in Cincinnati from Dec. 4 to 9, 1960; Major Robert E. Swan — the annual meeting of the American Academy of Dermatology and Syphilology in Chicago from Dec. 4 to 8; Major Frederick W. Wiese, Chief of Orthopedics—the Armed Services Orthopedic Seminary at Walter Reed Army Medical Center, Washington, D. C.

The new Chief of Orthopedic Surgery is Major Frederick W. Wiese. Dr. Wiese attended Johns Hopkins University. His internship was completed at Brooke Army Hospital, Fort Sam Houston, Texas. In addition to Senior Residency at the USAF Hospital, Lackland AFB, Texas, he received training at Duke University Hospital, Durham, North Carolina and Shriners Crippled Children's Hospital, Greenville, South Carolina.

Captain John A. Pennington has joined the staff as Chief of Anesthesiology, after completing his residency in Anesthesia at Strong Memorial Hospital, Rochester, New York. Dr. Pennington is a graduate of the University of Rochester School of Medicine, Rochester, New York.

Capt. William B. Barnes is the new Chief of Neuro - Psychiatry. He was formerly Assistant Chief of the Neuro - Psychiatric Branch at the USAF Hospital, Sheppard AFB, Texas. He is a graduate of the University of Texas Medical Branch, Galveston, Texas, and completed his residency in psychiatry at the University of Texas Medical Branch, Galveston.

Captain Albert J. Kahane has joined the staff of the 5040th USAF Hospital after completing his residency in Obstetrics and Gynecology at Long Island College Hospital, Long Island, New York. He is a graduate of the State University College of Medicine, New York.

Captain Timothy C. Zoba has joined the staff as a member of the Flight Surgeon's Office. He is a graduate of University of Pennsylvania and the New York Medical College, New York. He has also completed the Primary Course in Aviation Medicine at the School of Aviation Medicine, Brooks AFB, Texas.

Woman's Auxiliary News

A news column compiled by

Mrs. Vernon Cates

THE PRESIDENT'S MESSAGE

Now that election is over and most of us have had our vacations we should all be ready to go to work for the Auxiliary.

At long last my committee chairmen are all chosen and, even though I haven't heard from all of them, here they are:

Mrs. R. M. Johnson ..... Membership Bulletin
Box 1096, Kodiak
Mrs. Paul Haggland .... Paramedical Recruitment
502 Kellum, Fairbanks
Mrs. Robert Wilkins ..... Safety
2806 Knik, Anchorage
Mrs. C. C. Carter ..... Community Service
Box 2599, Juneau
Mrs. Bruce Keers ..... Mental Health
Box 407, Kodiak
Mrs. C. Chenoweth ..... Legislation
708 Mt. McKinley Apts., Anchorage
Mrs. Arthur Schaible ..... AMEF
520 Fourth, Fairbanks
Mrs. J. J. Fitzpatrick ..... Civil Defense
Box 1712, Anchorage
Mrs. Phillip Moore ..... Program
Sitka, Alaska

From time to time any one of these ladies may write to you and ask that you do something for her committee in your own community. If you are asked to do so please don't let her down. Remember this is your Auxiliary and no matter how good the officers and chairmen, they can't carry the load alone. Help them in every way you can.

Mrs. Cates called me the other night and asked that I include a biography of my life. Well, here goes and hope it won't be boring, it hasn't been for me.

I was born in Denver, Colorado, more years ago than really seem possible, 1909, to be exact. I graduated from high school at Wheatridge, Colorado, and then entered nurse's training at C. U. Medical Center, receiving my R. N. in 1930. I worked a year after graduating at Colorado General. In April, 1931, I married Mac, who was then a medical student. After his graduation in June we went to Indianapolis, Indiana, where he took his internship and I worked at a small hospital. Those months in Indiana during the depression and the condition of the hospital in which I worked is something I have never regretted doing but would never want to relive. Primitive is the only word which could describe it. My working hours were something, too. I was Supervisor of OB and Surgery—24-hour call 7 days a week with one week-end off about every third week, if I was lucky enough to get out of the building before my relief did. For this I received the grand salary of $54.00 a month, and maintenance.

In 1932 we moved to Arvada, Colorado, to start our practice. Those of you who were around then remember how hard it was to get someone to pay a doctor's bill. We had lots of patients but no money. Our pay when we got any was produce —eggs, apples, tomatoes, etc. I never will forget the day Mac arrived home after a long call in the country with half a ton of pumpkins. Oh! Those were the good old days and, I for one, don't want them back.

Our first son, Bob, was born in 1933. He is now a Chemical Engineer at Wyandotte Chemical Company in Michigan. He is married and the father of our three grandchildren, Deborah Ann, 4½; Stephen Robert, 3, and Natalie Ann, just past 1. (Don't get me started, I'm a doting grandma.)

We moved to Pueblo, Colorado, in 1935 where Mac went to work for C. F. and I. In 1936 we built our own home and had just moved in when son, James, arrived. Jim is now an Aeronautical Engineer at Emerson Electric, St. Louis, Missouri. He is also married.

Sandra Ann arrived in October, 1942, just before her Daddy left for the far north—Alaska—

where he caught a strange fever that was only cured by returning in 1950, with all of us, to live in Mt. Edgecumbe.

Since living here we have bought an island where I spend most of my summer gardening, and later gathering the produce to freeze or can for the winter. I have enjoyed living here, following my hobbies of sewing and gardening, along with boating, going to the numerous activities around us and taking part in them.

I am looking forward to seeing our daughter graduate from high school in the spring and then the Medical Meeting here in Sitka, May 24-27, where I hope I will have the opportunity to see many of you whom I have met at other meetings, and to meet others whom I have not had the pleasure of meeting.

My best wishes for a Happy Holiday Season to all of you.

Helene L. McBrayer.

REMEMBER

"The Auxiliary is the balance wheel of the Medical Society and the arch of public relations of the AMA," says Thomas Hendricks, assistant to the Executive Vice-President of the AMA.

Even though you may not be an active auxiliary member you, as a doctor's wife, are the "Walking Commercial" for your local Medical Society and Auxiliary.

THE ROAD TO EFFECTIVE CITIZENSHIP

Excerpts from pamphlet prepared for the 1960 Convention of the Woman's Auxiliary to the AMA by Dr. McKinnie L. Phelps, Denver.

In a representative form of government every citizen has the right to demand certain things from any public official—

1. Personal Integrity — in both letter and spirit.

2. A good working knowledge of the job in question—from the presidency on down.

3. An ability to ascertain and follow true public opinion.

4. A deep sense of responsibility and a determination to work for the best interests of the majority while resisting selfish and narrow pressures.

A CITIZEN'S RESPONSIBILITIES

Constantly seek for and encourage candidates . . . who can meet these high standards—do all in his power to help such individuals be elected or appointed—keep himself and his friends regularly and thoroughly informed on current issues and considerations—do everything he can to maintain a two-way flow of communications between himself and his friends and representatives in government.

OUR INVESTMENT AND RETURN

Investment is the expenditure of time, thought and work—return is the future of America.

SOME POLITICAL FACTS OF LIFE

Less than 180,000 doctors (in a nation of approximately 180 million)—The great majority are not active politically in the slightest degree. Any notion that . . . the medical profession . . . can function effectively as a lobby from point of view of power in numbers is obviously wrong. Some great organizations such as labor . . . tens of millions . . . attempt to create the impression that they function as solid voting blocks. Both premises are obviously wrong. It is evident, however, that medical and similar organizations do have an influence in politics far beyond the impact of their own members . . . because millions know in their hearts that the chief concern of the professional world is the health of all the people and sincere and deep concern with the best interests of the nation.

STEPS TO EFFECTIVE CITIZENSHIP

1. Take an active, willing and interested part in . . . PTA groups, young people's activities, fund drives, church work, chambers of commerce, etc.

2. Plan contributions of time in same manner we plan budget. Concentrate on making a real contribution.

3. Take an active part in local political activity of the party of your choice. Many friends we make will be grateful for guidance. Remember, as doctors, that our most devoted and grateful friends are satisfied patients. Urge them to help

out in political issues of the day (doctors of America see two million patients a day). Be proud of our part in politics as perhaps our highest form of social endeavor.

SPECIAL AUXILIARY SUBSCRIPTION RATE FOR THE AMA NEWS

The Board of Trustees of the AMA has approved a special price of $1.50 a year, which is 50% of the regular rate, for the AMA News to be sent to the home address of members of the Women's Auxiliary, as well as all wives and mothers of physicians.

The copy being addressed to the physician cannot be transferred to the wife or mother, as the copy mailed to the physician must be sent to the professional mailing address, as it is the address control for the master list of physicians maintained by the AMA.

Therefore, the subscription must be ordered by the individual auxiliary member and must be mailed to the home address. Orders should be sent to the Circulation and Records Department of the AMA.

TO ALL WIVES

Have you acquainted yourself with the new magazine, **The Doctor's Wife,** which was published for the first time in March of this year? It reports happily that the medical family on a national scale is doing well. The divorce rates in medical marriages are lower than in any other profession. We average 3½ children per family among whom there is almost no delinquency and who are above par in social and educational standards. Obviously, you women are concerned with your home and family, and the results are warmly rewarding. BUT statistics would seem to indicate that there is a person in each of our families who possibly needs more attention—our husband. Unfortunately our husbands die sooner than do men in other fields. And not only do we lose many of them at an early age, we see too little of them at any age.

Columnist Hal Boyle says, "The best way for wives to cut down on their years of widowhood is to start taking care of their husbands NOW."

TEN MENTAL HEALTH RULES

1. A tolerant, easy-going attitude toward yourself as well as others.
2. A realistic estimate of your own abilities neither underestimating or overestimating.
3. Self-respect.
4. Ability to gain love and consider the interests of others.
5. Ability to take life's disappointments in stride.
6. Liking and trusting other people and expecting others to feel the same way about you.
7. Feeling part of a group and having a sense of responsibility to your neighbors and fellow men.
8. Acceptance of your responsibilities and doing something about your problems as they arise.
9. Ability to plan ahead and set realistic goals for yourself.
10. Putting your best efforts into what you do and getting satisfaction out of doing it.

National Association for Mental Health.

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TO
ALASKA MEDICINE
Volume II
1960

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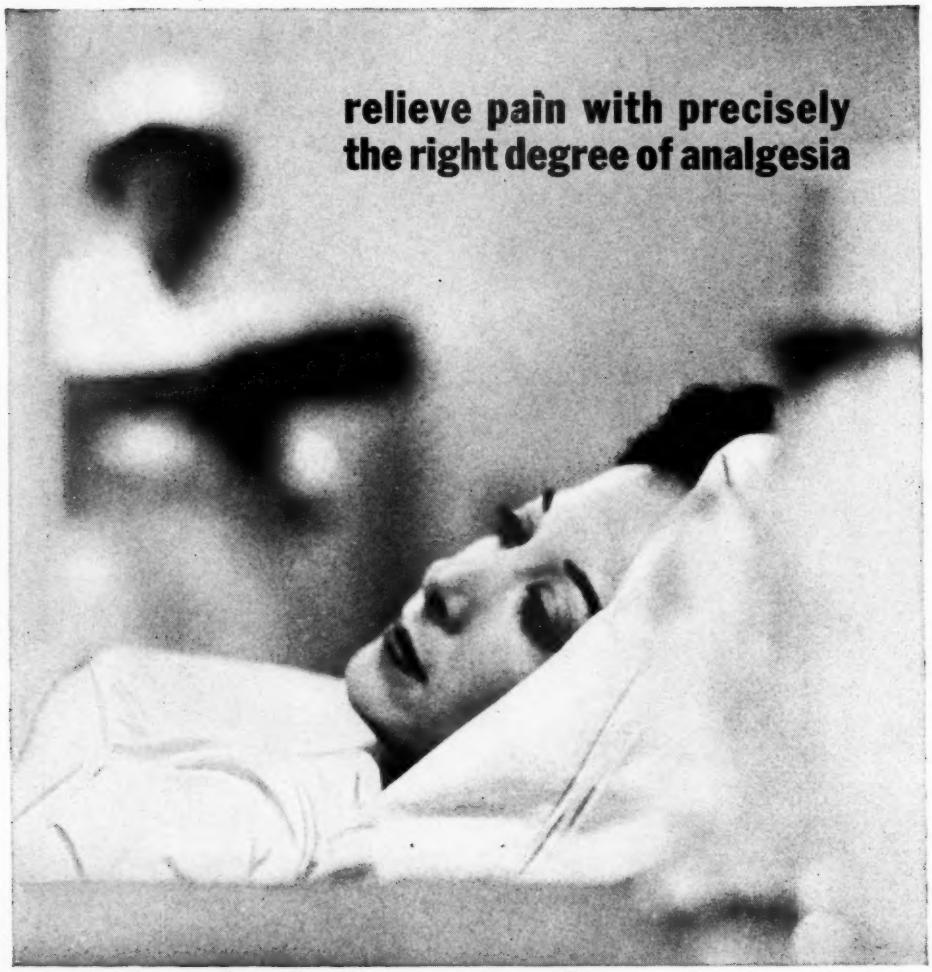

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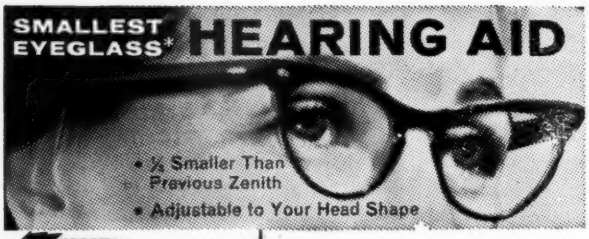

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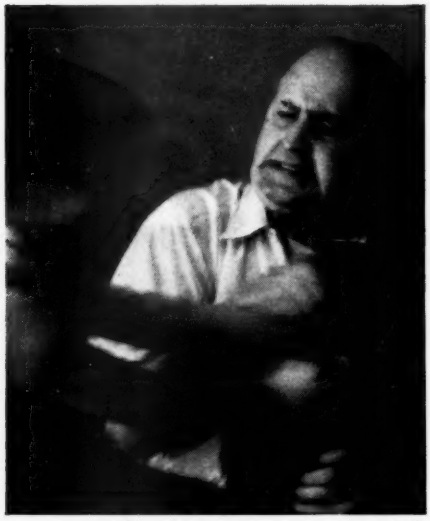

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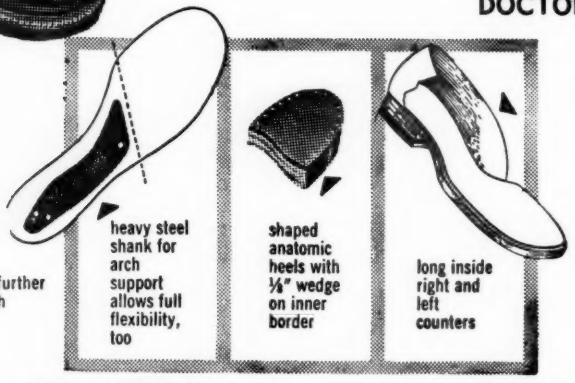
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Pathologist—MICHAEL F. BEIRNE, M.D.

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on the pathogenesis of pyelonephritis:

"An inflammatory reaction here [renal papillae] may produce sudden rapid impairment of renal function. One duct of Bellini probably drains more than 5000 nephrons. It is easy to see why a small abscess or edema in this area may occlude a portion of the papilla or the collecting ducts and may produce a functional impairment far in excess of that encountered in much larger lesions in the cortex."[1]

The "exquisite sensitivity"[2] of the medulla to infection (as compared with the cortex), highlights the importance of obstruction to the urine flow in the pathogenesis of pyelonephritis. "There is good cause to support the belief that many, perhaps most, cases of human pyelonephritis are the result of infection which reaches the kidney from the lower urinary tract."[3]

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